

What Is Claimed Is:

1. A method for controlling at least one operating variable of an electrolytic bath,
in which the concentration of at least one bath component is ascertained,
in which furthermore the concentration values in a control device are processed into control variables of a control element,
and in which using the control element the operating variable is changed in accordance with setpoint inputs,
wherein the concentration is ascertained,
by withdrawing a sample from the bath (3, 4, 9-12),
by exciting the sample using electromagnetic radiation (101),
and by analyzing the spectrum of the light emitted by the sample.

2. The method as recited in Claim 1,
wherein,
the sample is supplied via a line (70-75, 82-87, 94-99) to at least one sample container (67).

3. The method as recited in Claim 2,
wherein several sample containers (67) are used, which are successively filled with the sample,
and the sample containers (67) are carried past a spectroscopic measuring setup (65).

4. The method as recited in Claim 1,
wherein several samples are brought onto a sample plate (66),
the samples being carried past a spectroscopic measuring setup (65) by rotating the sample plate (66).

5. The method as recited in Claim 1,
wherein the sample is optically excited.

6. The method as recited in Claim 5,
wherein the sample is excited by laser beams (101).

7. A device for controlling at least one operating variable
of an electrolytic bath,
having a setup for ascertaining the concentration of at least
one bath component,
furthermore having a setpoint adjuster for the operating
variable,
furthermore having an open-loop and closed-loop control
device, which is connected to the setup for ascertaining the
concentration and to the setpoint adjuster, and having a
control element, which is connected to the control device for
changing the operating variable,
wherein a device (70-75, 82-87, 94-99) is provided for
transmitting at least one sample of the bath (3, 4, 9-12) to
the setup (65) for ascertaining the concentration,
the setup (65) for ascertaining the concentration of at least
one bath component includes a laser (100), which is directed
onto the sample, the setup (65) for ascertaining the
concentration includes a setup (103) for the spectral analysis
of the light emitted by the sample.

8. The device as recited in Claim 7,
wherein, in an electroplating plant having several baths (3,
4, 9-12), a pipeline system (70-75, 82-87, 94-99) is provided
for transporting the samples to the setup (65) for
ascertaining the concentration.

9. The device as recited in Claim 7,
wherein in each case one intake end of a pipe (70-75) is
immersed into one bath (3, 4, 9-12),

the pipes (94-99) end on the outlet side at a rotatable sample plate (66), which partially lies in the radiation range of the laser (100).

10. The device as recited in Claim 7, wherein a device (106-109) for removing analyzed samples is associated with the sample plate (66).